



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0155; Project Identifier MCAI-2021-00585-T]

RIN 2120-AA64

Airworthiness Directives; MHI RJ Aviation ULC (Type Certificate Previously Held by Bombardier, Inc.) Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain MHI RJ Aviation ULC Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes; Model CL-600-2C10 (Regional Jet Series 700, 701 & 702) airplanes; Model CL-600-2C11 (Regional Jet Series 550) airplanes; Model CL-600-2D15 (Regional Jet Series 705) airplanes; Model CL-600-2D24 (Regional Jet Series 900) airplanes; and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. This proposed AD was prompted by reports of displayed headings changing from MAG to TRU with no pilot action, which may result in misleading heading information on both primary function displays (PFDs) and multi-function displays (MFDs), and misleading course information on flight management systems (FMS). This proposed AD would require amending the existing airplane flight manual (AFM) to provide the flightcrew with updated procedures for accurate heading and course information. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact MHI RJ Aviation ULC, 12655 Henri-Fabre Blvd., Mirabel, Québec J7N 1E1 Canada; Widebody Customer Response Center North America toll-free telephone +1-844-272-2720 or direct-dial telephone +1-514-855-8500; fax +1-514-855-8501; email thd.crj@mhirj.com; Internet <https://mhirj.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0155; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Thomas Niczky, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart

Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2022-0155; Project Identifier MCAI-2021-00585-T” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Thomas Niczky,

Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; email 9-avs-nyaco-cos@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued TCCA AD CF-2021-19, issued May 13, 2021 (TCCA AD CF-2021-19) (also referred to after this as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for certain MHI RJ Aviation ULC Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes; Model CL-600-2C10 (Regional Jet Series 700, 701 & 702) airplanes; Model CL-600-2C11 (Regional Jet Series 550) airplanes; Model CL-600-2D15 (Regional Jet Series 705) airplanes; Model CL-600-2D24 (Regional Jet Series 900) airplanes; and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. You may examine the MCAI in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0155.

This proposed AD was prompted by reports of displayed headings changing from MAG to TRU with no pilot action, which may result in misleading heading information on both PFDs and MFDs, and misleading course information on FMS. This misleading information may occur on airplanes with certain inertial reference systems (IRSs); the IRS is part of the navigation system and provides data on the airplane's position. The FAA is proposing this AD to prevent operation outside the terrain and obstacle protection provided in instrument procedure and route designs, which could result in reduced operational safety margins. See the MCAI for additional background information.

Related Service Information Under 1 CFR Part 51

MHI RJ Aviation ULC has issued the following service information, which provides a procedure for revising, among other procedures, the “Uncommanded True Heading Indication.”

- Section 05-15 – Instrument Systems, of Chapter 5, ABNORMAL PROCEDURES, of MHI RJ Model CL-600-2B19 AFM, CSP A-012, Volume 1, Revision 74, dated July 3, 2020.

Bombardier has issued the following service information, which provides a procedure for revising, among other procedures, the “Uncommanded True Heading Indication.” These documents are distinct since they apply to different airplane models.

- Section 05-15 – Instrument Systems, of Chapter 5, ABNORMAL PROCEDURES, of Bombardier CRJ Series Regional Jet Model CL-600-2C10 (Series 700, 701, 702) and CL-600-2C11 (Series 550) AFM, CSP B-012, Revision 30, dated February 28, 2020.

- Section 05-15 – Instrument Systems, of Chapter 5, ABNORMAL PROCEDURES, of Bombardier CRJ Series Regional Jet Model CL-600-2D24 (Series 900) and Model CL-600-2D15 (Series 705) AFM, CSP C-012, Revision 24, dated March 27, 2020.

- Section 05-15 – Instrument Systems, of Chapter 5, ABNORMAL PROCEDURES, of Bombardier CRJ Series Regional Jet Model CL-600-2E25 (Series 1000) AFM, CSP D-012, Revision 23, dated February 14, 2020.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the State of Design Authority, the FAA has been notified of the unsafe condition described in the MCAI and service information referenced above. The FAA is proposing this AD because the FAA evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Proposed AD Requirements in this NPRM

This proposed AD would require accomplishing the actions specified in the service information already described.

TCCA AD CF-2021-19 requires operators to "advise all flight crews" of revisions to the AFM, and thereafter to "operate the aircraft accordingly." However, this proposed AD would not specifically require those actions as those actions are already required by FAA regulations. FAA regulations require operators furnish to pilots any changes to the AFM (for example, 14 CFR 121.137), and to ensure the pilots are familiar with the AFM (for example, 14 CFR 91.505). As with any other flightcrew training requirement, training on the updated AFM content is tracked by the operators and recorded in each pilot's training record, which is available for the FAA to review. FAA regulations also require pilots to follow the procedures in the existing AFM including all updates. 14 CFR 91.9 requires that any person operating a civil aircraft must comply with the operating limitations specified in the AFM. Therefore, including a requirement in this proposed AD to operate the airplane according to the revised AFM would be redundant and unnecessary.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 1,113 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

Estimated costs for required actions

| Labor cost | Parts cost | Cost per product | Cost on U.S. operators |
|------------------------------------|------------|------------------|------------------------|
| 1 work-hour X \$85 per hour = \$85 | \$0 | \$85 | \$94,605 |

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

MHI RJ Aviation ULC (Type Certificate Previously Held by Bombardier, Inc.):

Docket No. FAA-2022-0155; Project Identifier MCAI-2021-00585-T.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by
[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL
REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to MHI RJ Aviation ULC (type certificate previously held by Bombardier, Inc.) airplanes, certificated in any category, as identified in paragraphs (c)(1) through (3) of this AD.

(1) Model CL-600-2B19 (Regional Jet Series 100 & 440) airplanes equipped with inertial reference system (IRS) part number (P/N) 465020-0400-0400, 465020-0400-0401, 465020-0400-0402, or 465020-0400-0403.

(2) Model CL-600-2C10 (Regional Jet Series 700, 701 & 702) airplanes, Model CL-600-2C11 (Regional Jet Series 550) airplanes, Model CL-600-2D15 (Regional Jet Series 705) airplanes, and Model CL-600-2D24 (Regional Jet Series 900) airplanes, equipped with IRS P/N 465020-0400-0401, 465020-0400-0402 or 465020-0400-0403.

(3) Model CL-600-2E25 (Regional Jet Series 1000) airplanes, equipped with IRS P/N 465020-0400-0402 or 465020-0400-0403.

(d) Subject

Air Transport Association (ATA) of America Code 34; Navigation System.

(e) Unsafe Condition

This AD was prompted by reports of displayed headings changing from MAG to TRU with no pilot action, which may result in misleading heading information on both primary function displays (PFDs) and multi-function displays (MFDs), and misleading course information on flight management systems (FMSs). The FAA is issuing this AD to prevent operation outside the terrain and obstacle protection provided in instrument procedure and route designs, which could result in reduced operational safety margins.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Amend Existing Airplane Flight Manual (AFM)

Within 30 days after the effective date of this AD: Revise the existing AFM to incorporate the information specified in Section 05-15 – Instrument Systems, of Chapter 5, ABNORMAL PROCEDURES, of the applicable AFM identified in Figure 1 to paragraph (g) of this AD.

Figure 1 to paragraph (g) – *AFM Revision*

| Airplane Model | AFM Title | AFM Revision/Date |
|-----------------------|---|--------------------------------------|
| CL-600-2B19 | MHI RJ Model CL-600-2B19 AFM, CSP A-012, Volume 1 | Revision 74, dated July 3, 2020 |
| CL-600-2C10 and -2C11 | Bombardier CRJ Series Regional Jet Model CL-600-2C10 (Series 700, 701, 702) and CL-600-2C11 (Series 550) AFM, CSP B-012 | Revision 30, dated February 28, 2020 |
| CL-600-2D15 and -2D24 | Bombardier CRJ Series Regional Jet Model CL-600-2D24 (Series 900) and Model CL-600-2D15 (Series 705) AFM, CSP C-012 | Revision 24, dated March 27, 2020 |
| CL-600-2E25 | Bombardier CRJ Series Regional Jet Model CL-600-2E25 (Series 1000) AFM, CSP D-012 | Revision 23, dated February 14, 2020 |

(h) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal

inspector, the manager of the local flight standards district office/certificate holding district office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or MHI RJ Aviation ULC's TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(i) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) TCCA AD CF-2021-19, issued May 13, 2021, for related information. This MCAI may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0155.

(2) For more information about this AD, contact Thomas Niczky, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7347; email 9-avs-nyaco-cos@faa.gov.

(3) For service information identified in this AD, contact MHI RJ Aviation ULC, 12655 Henri-Fabre Blvd., Mirabel, Québec J7N 1E1 Canada; Widebody Customer Response Center North America toll-free telephone +1-844-272-2720 or direct-dial telephone +1-514-855-8500; fax +1-514-855-8501; email thd.crj@mhirj.com; Internet <https://mhirj.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued on March 25, 2022.

Ross Landes, Deputy Director for Regulatory Operations,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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